

CLAIMS

What is claimed is:

1. A bracket system comprising a bracket and adapted for use with a supporting structure, said bracket comprising:

end means adapted for being at least partially received through a first receiving aperture of said supporting structure, so that said bracket is in a first coupling position relative to said supporting structure;

at least one downwardly projecting slot for receiving a first portion of said supporting structure when said bracket is in a final coupling position relative to said supporting structure; and

said bracket and said at least one downwardly projecting slot are sized and configured so that rotational or pivotable forces externally exerted on said bracket about said downwardly projecting slot are prevented from moving said bracket from said final coupling position to said first coupling position.

2. A bracket system in accordance with claim 1, characterized in that said bracket is sized and configured so that movement of said bracket from said final coupling position to said first coupling position requires said bracket to be first lifted directly vertically upward relative to said supporting structure.

3. A bracket system in accordance with claim 1, characterized in that when said bracket is in said final coupling position, a cantilevered load can be placed on said bracket and result in an absence of substantial, highly localized stresses in said bracket.

4. A bracket system in accordance with claim 1, characterized in that said downwardly projecting slot is located on or adjacent said end means.

5. A bracket system in accordance with claim 4, characterized in that said first portion of said supporting structure is a vertically directed section of said supporting structure, which also forms a lower boundary of said first receiving aperture of said supporting structure.

6. A bracket system in accordance with claim 1, characterized in that when said bracket is in said final coupling position, said first portion of said supporting structure is supported on an upper surface of said downwardly projecting slot.

7. A bracket system in accordance with claim 1, characterized in that:
said end means comprises an upright portion and an arcuate intermediate portion;
said downwardly projecting slot is formed on an underside of said arcuate intermediate portion;

5 said support structure comprises a rack having said first receiving aperture formed in a lateral surface of said rack; and

said upright portion is extended through said first receiving aperture when said bracket is in said final coupling position.

8. A bracket system in accordance with claim 7, characterized in that:
said rack further comprises an upper rack aperture formed in an upper surface of said rack; and

5 when said bracket is in said final coupling position, an end of said upright portion at least partially extends upwardly through said upper rack aperture.

9. A bracket system in accordance with claim 1, characterized in that said

bracket comprises said at least one downwardly projecting slot and a second downwardly projecting slot for receiving a second portion of said supporting structure when said bracket is in said final coupling position.

10. A bracket system in accordance with claim 9, characterized in that:

said end means comprises a first projection adapted to be received through said first receiving aperture of said supporting structure, when said bracket is in said final coupling position;

5 said supporting structure comprises a second receiving aperture located below said first said receiving aperture; and

said end means further comprises a second projection adapted to extend through said second receiving aperture when said bracket is in said final coupling position.

11. A bracket system in accordance with claim 10, characterized in that:

said first portion of said supporting structure is a vertically directed section of said supporting structure, which also forms a lower boundary of said first receiving aperture; and

5 said second portion of said supporting structure is a vertically directed section of said supporting structure, which also forms a lower boundary of said second receiving aperture.

12. A bracket system in accordance with claim 1, characterized in that:

said bracket comprises a terminating end opposite said end means; and

5 when said bracket is in said final coupling position, said bracket will remain substantially stationary without any pivotal movement when upwardly directed forces are exerted on or adjacent to said terminating end.

13. A bracket for use with a stationary supporting rack having a lateral side with an upper rack slot and a lower rack slot positioned directly below said upper rack slot, said bracket comprising an end, and said end comprising:

an upwardly projecting recess;

5 an upper projection adapted to be received through said upper rack slot when said bracket is in a final coupling position relative to said rack;

a first downwardly projecting slot formed adjacent said upper projection, and adapted to receive a first portion of said rack when said bracket is in said final coupling position relative to said rack;

10 a second lower projection below said upper projection, and adapted to be received through said lower rack slot when said bracket is in said final coupling position; and

a second downwardly projecting slot formed adjacent said lower projection, and adapted to receive a second portion of said rack when said bracket is in said final coupling position.

14. A bracket in accordance with claim 13, characterized in that:

said first portion of said rack forms a lower edge of said upper rack slot; and

said second portion of said rack forms a lower edge of said lower rack slot.

15. A bracket in accordance with claim 13, characterized in that each of said first and said second downwardly projecting slots is of a rectangular configuration.

16. A bracket in accordance with claim 13, characterized in that said first downwardly projecting slot is substantially identical to said second downwardly projecting slot in size and shape.

17. A bracket for use with a stationary supporting rack having a lateral side

with a lateral rack slot and a top section with a top rack slot, said bracket having an end, and said end comprising:

an upper projection adapted to be received through said lateral rack slot when said bracket is in a final coupling position relative to said rack;

a first downwardly projecting slot formed adjacent said upper projection and adapted to receive a first portion of said rack when said bracket is in said final coupling position relative to said rack; and

said upper projection further adapted to be partially received through said top rack slot when said bracket is in said final coupling position.

18. A bracket system in accordance with claim 1, characterized in that said supporting structure comprises a tie and belt rack.

19. A bracket system in accordance with claim 1, characterized in that said bracket further comprises:

an upright formed in said end means;

an arcuate intermediate portion integrally formed and projecting downwardly from said upright;

said downwardly projecting slot is formed in an underneath surface of said arcuate portion; and

a U-shaped hook having an upwardly projecting opening, and formed by a downwardly projecting side integrally formed with said arcuate portion.

20. A bracket system in accordance with claim 1, characterized in that said bracket further comprises:

an elongated portion terminating in a distal end having lip means for assisting in maintaining the position of an element to be supported on an upper surface of said elongated portion;

said end means comprises a proximal end having an upper portion with an arcuate configuration;

an upwardly projecting recess formed within said arcuate-shaped upper portion;

an upper projection formed along the end of said upper arcuate-shaped portion, and extending substantially horizontally and then downwardly from said upper portion; and

a lip formed at said lower portion of said upper projection, said lip projecting downwardly so as to form said downwardly projecting slot.